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IV.—*Notes of a Journey from Bida in Nupe, to Kano in Haussa, performed in 1862.* By Dr. W. B. BAIKIE, R.N. Extracted from portions of Dr. Baikie's Journals in the possession of the Foreign Office, by J. KIRK, Esq., M.D.

Read, January 14, 1867.

IN December, 1861, Dr. Baikie left the settlement he had formed at the confluence of the Niger and Binue, and went to Bida, the capital of Nupe, a town of great size, to the north of the Kworra, from which it is distant about 16 miles.

It was not before the month of April that arrangements for the journey were completed, pack-oxen bought, and the jealousy of native traders overcome. On the 12th of April, 1862, Dr. Baikie set out in company with Ibrahim, a native of Zariya, then returning with presents from King Massaba to his Chief. The first was a short march of 9 miles to Kpakpagi, over level wooded country. Next day, many towns of considerable size were passed, and the boundary of the kingdom of Nupe crossed. They slept at Lemu, inhabited by Gbari, a heathen race, who on the arrival of the travellers were celebrating a pagan festival.

On the 14th they came to Tsiji, which overlooks the valley of the River Kaduna. The country passed consisted of low undulating plains, with sandstone ridges, covered with grass, bush, and forest. The meadow in front was clothed with grass and a few large trees scattered here and there, in which the people had placed bee-hives made of basket-work. Heavy rains, which fell in the night, inundated the plain and detained the party the following day.

On the 16th, crossing the alluvial valley, they reached Gbogi. On the banks of the Kaduna, outside the town wall, a steep descent of 50 feet leads to the water, which had already risen a foot from the early rains. The middle channel, which was 6 feet deep, was crossed in canoes, which occupied until 3 in the afternoon; then, crossing the plain diagonally in a north-easterly direction, they left the valley and ascended a gentle slope with dense bush and forest. They spent the night at a town of the Bassa people, from which an extensive view was obtained over the flat monotonous landscape. These Bassa are part of a wild turbulent race, living in isolated communities. They are for the most part heathen, but practise circumcision. At the foot of a sandstone ridge, on which the town was built, there lay a pool of water, to which after dark Dr. Baikie went to wash, but found on his return that it was full of crocodiles, fed and worshipped by the pagan inhabitants of the place.

17th April. After crossing several sandstone ridges clothed

Map to accompany Notes of a Journey
FROM BIDA IN NUPE, TO KANO IN HAUSSA;
Performed by
D^r. W. B. Baikie, R.N.

1862.

..... 5 10 20 30 40 50 60 70 80 90 100
English Miles

Koton-koro

D' Baikie's Route is Coloured

H

70 80 90 100

pany Notes of a Journey

UP, TO KANO IN HAUSSA;

performed by

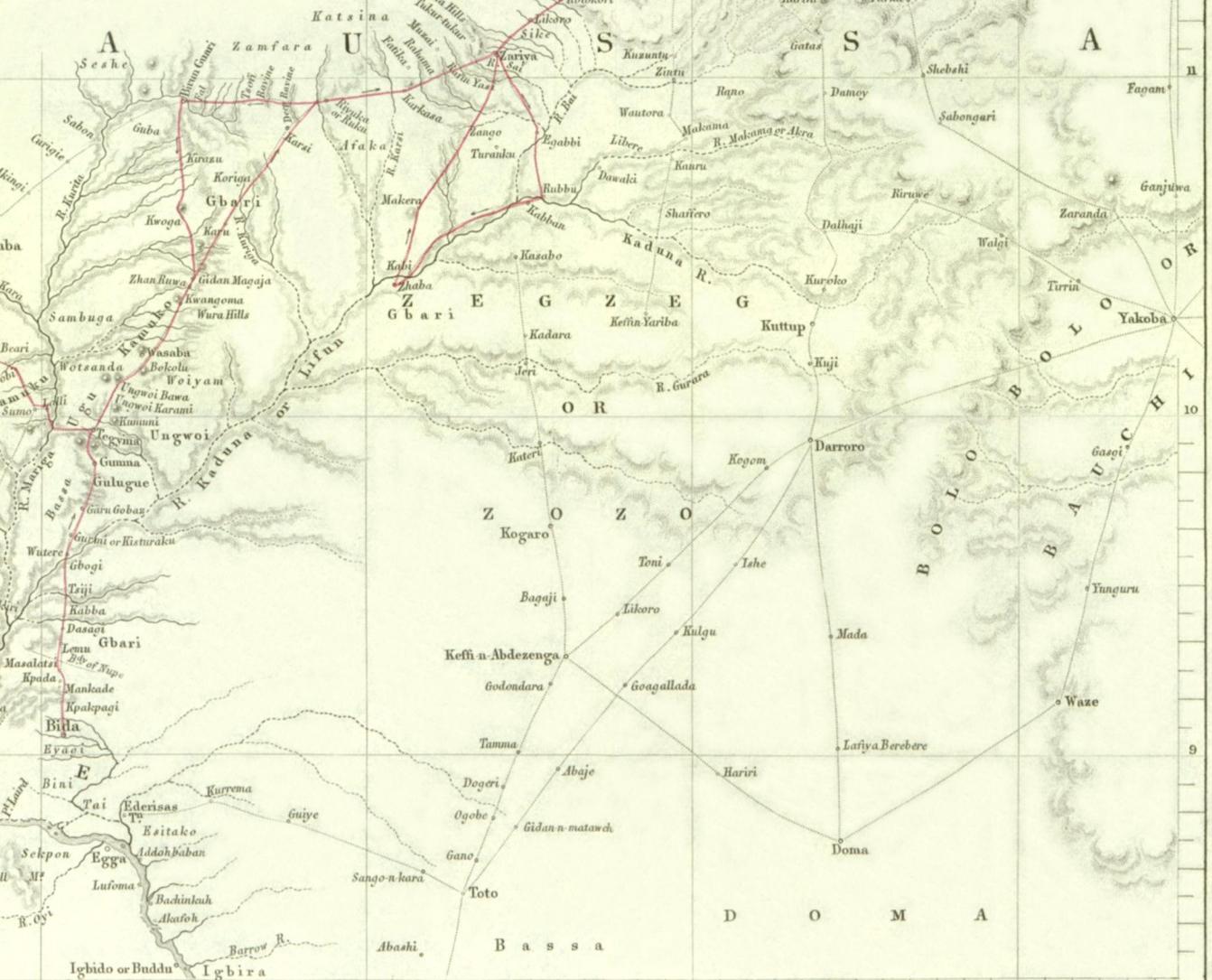
J.B. Baikie, R.N.

1862.

50 60 70 80 90 100
English Miles

from Dr. Baikie's Original Journal in the Foreign
additional Latitudes and Longitudes — J.A.

route is coloured



with bush and trees, among which were the fleshy euphorbia, they made a steady ascent to Garu Gobaz. The rock formation here is still the stratified sandstone found in Nupe, with a very steep dip to north and north-east. On one of the ridges before coming to Gumna, there are several prominent peaks of semi-vitrified rocks, which consist chiefly of quartz. Gumna is built between two rocky hills, which rise from a well-cultivated plain. It is the chief town of this portion of Bassa, and contains 3000 mixed population, chiefly Bassa and Gbari, all of whom speak Haussa.

On leaving Gumna, it was necessary to have the loads carried outside the gates before being placed on the animals. Having crossed a low ridge of granite, they entered a rocky defile, with perpendicular faces 200 feet high, on which were native villages, whose inhabitants are an industrious race, cultivating the rich lands below.

Tegyina, which they next came to, contains 3000 people, chiefly Kamuko, with a few Bassa and Gbari. Although inferior in rank to Gumna, it is a town of greater importance. In the market, milk and butter were cheap and plenty, also vegetables; but guinea-worm is very prevalent among the people, from the water being drawn from stagnant pools in the town.

21st April. Under an escort of one horseman and one foot soldier, they set out, and, after riding 8 miles, came to a detached rock, named Ungwoi Karami, which rises 500 feet above the plain. Here is a barrier of thorns, at which toll is demanded of all caravans at the rate of 5 cowries each man, which in a large party comes to a considerable amount; and a like impost is taken at two other barriers in front. Being the King's guest, this toll was not demanded, but a present given instead. After passing the second of these barriers, the rocks retire on the west, leaving an open valley, and a huge rock standing in front, at a small village, on whose slope the party remained. While huts were being prepared they sat under the shade of a large baobab-tree; behind was a perpendicular face of rock; near it a group of women were engaged rubbing down grain into meal under the shade of a euphorbia which grew from the crevices of the granite rock. The green valley in front, dotted with trees, pools of water, and herds of cattle, seemed like an English park.

The chief's daughter, a lady of mature age, brought water to drink; she was dressed with only a few leaves hung in front from a cord round the waist. The men had a leather apron behind. Yet this independent, rude people are kind and intelligent.

On the 22nd April they left Ungwoi and entered Kamuko, reaching Wasaba in the afternoon. This is a walled town,

built at the foot of a conical hill of granite, whose north and eastern slopes are precipitous. From half-way up Dr. Baikie obtained a general view over the country, but was prevented from ascending, as the summit is held sacred by the natives. Inside the town walls there are borassus, hyphaene, and date-palms. By the river-sides in the surrounding country the raphia and wild date-palms are abundant.

23rd April. The path was through dense jungle with open glades, in which herds of cattle were grazing. The shea butter-tree here attains an unusual size, and ripens its fruit in June. The people were now busy collecting the fruit of the locust-tree. On the 24th April a change was noticed in the vegetation, which now differed from that of Nupe.

On passing Gidan Magaja they left Kamuko, and entered again among the Gbari, sleeping in the town of Koriga, beautifully situated in a valley. Many smelting-furnaces had been seen, and iron-ore is here abundant in the metamorphic rocks.

On the 26th April they crossed level ground of a stiff clay, with ravines 50 feet deep, cut by the floods; the sides of these consisted of beds of clay and gravel. In the bottom of stream-beds the rocks were commonly of metamorphic schist, but the plains where the clay has been washed away showed granite, either flat or protruded above the general level. As yet the rains had scarcely influenced the rivers, and where now only a few inches of water were found, in the month of September there would be two or three fathoms, and canoes required to cross with.

At Ruku, or Riyuka, where they slept on the 27th, the papaw-tree was seen in cultivation; 28th April they had entered the country of Zariya, and crossed a dense forest full of wild animals, on the banks of the Karsi. The deleb palm (*Borassus flabelliformis*) forms a marked feature of the landscape, with its tall cylindrical swollen stems.

On the 30th April they were before Zariya, one of the great centres of commerce in Haussa, frequented by merchants from Bornu, Adamawa, and Nupe. The silk-cotton trees which surround the town distinguish it in the plain; of these there are upwards of 1000, varying from 50 to 70 feet high. When close to the city a small stream is crossed, and the ground rises to the walls, which are 10 miles in circumference, and from 16 to 18 feet high, pierced by eight gates, the ninth having been closed after the entrance by it of Mallam Musa.

At a former time the space included by the wall was much greater than at present, and included the Kufena hills, to the north-west, 700 feet high, and from which the only general view of the city is to be had. Zariya is built on a plain of tertiary

clay, lying on granite, which is here and there protruded. The height of this plain above the sea is 2000 feet, and rivers drain to the Kaduna, and so to the Kworra. Inside the gate there are scattered groups of conical thatched huts, with gardens and fields between, wherein are plantains, papaws, date-palms, and vegetables, with pasture for cattle. The king was now absent, engaged in war with those to the south. While messengers went to inform him of Dr. Baikie's arrival, an opportunity was offered of examining the towns, and gaining information regarding its history and commerce. The slave-market has of late years diminished, and not more than 300 daily were usually to be found in it at the time of Dr. Baikie's visit, whereas three years previously as many as 4000 might have been seen; the price is one-third less than at Bida, on the Niger. Here Dr. Baikie purchased a young woman for 90,000 cowries, to save her from being sent to the open market. On one occasion, when there were only 90 slaves in market, Dr. Baikie estimated the attendance from 3000 to 4000. Besides slaves, there are horses, cattle, dates, pomegranates, figs, and wild fruits, with wheat, millet, cocos, cassada, onions, milk, and butter to be obtained. Turkey cocks are sold from 700 to 1000 cowries, and a young horse was purchased for 30,000 cowries. Theft in market is punished by a loss of hands and feet, and the fifth is a capital crime. There is no market-tax, but all animals are charged on leaving the city; a tax of 450 cowries is levied on each indigo-pit. An old man, with whom Dr. Baikie conversed, had known Dr. Vogel, and remembered his visit to Zariya, which was in the time of Abdu Salami: he was much liked, but spoke little Arabic or Haussa; he remained over a month. Another had been companion to Dr. Barth from Timbuktu to Kúka, and had seen Vogel in Bornu; and an old man recollects Clapperton's visit in the time of Abdul Kerim. The mosque of Zariya is a large building, 120 feet long, with two domes and a square tower at the north-east, ascended by steps. On the 20th May word came from the king asking Dr. Baikie to visit his war camp, which was to the south, near the Kaduna. The invitation was accompanied by a present of a slave boy. On the 26th May Dr. Baikie set out again, accompanied by Ibrahim. Outside the wall they passed herds of cattle, and many fields of corn, coco, and ground-nuts. At sunset they passed a beautiful village, in a clump of locust-trees, but rode on and slept at a few huts, which they reached by starlight; here they found bad accommodation, and went to bed after supping on meal and cold water.

¹⁴⁵ On 27th May they came to Egabbi, $16\frac{1}{2}$ miles from Zariya, by the road, having crossed on the way several streams flowing south-east. Here Ibrahim set off on some private business,

leaving Dr. Baikie to exercise patience until his return, which was not before the 2nd June; then still following a southerly course, and crossing a stream 100 yards wide, with banks 15 feet deep, which in the rainy season would be filled, although now it had but 18 inches water, they came to Rubbu, distant from the Kaduna three-quarters of a mile. The stream is here half a mile wide and 5 feet deep. Here the aneroid barometer was injured by a fall. Being now in country devastated by war and near the army, it became impossible to obtain food, and for several days Dr. Baikie had not enjoyed one full meal.

Turning westward they recrossed the Kaduna at one of its windings, where it was only 4 feet deep, and again on the 11th of June, where it was 200 yards wide and 5 feet deep, flowing among schist rocks.

At the war camp Dr. Baikie was well received by the king, but found it difficult to procure even the commonest food, which the king did not think it his duty to send to a visitor; at the same time he deferred payment of a debt of 450,000 cowries due for ten doubloons, until arrival in Zariya, but a slave girl was sent to reckon as 100,000, and a present of a slave to Dr. Baikie and his servant, in consideration of the presents given. The huts here were mere temporary shelters, ill calculated to resist the force of the tropical rains which now fell, so that the ground inside became a muddy puddle, on which branches were placed to keep the goods dry.

On the 15th June, the king moved his camp to the Kaduna: all was confusion; about 3000 horses, men, women, and beasts of burden pushing forward, worked the wet ground into a quagmire. The king went past with a guard of 50 horsemen and foot soldiers in front and in the rear, and selected a spot near the river, where rough huts were formed of branches, but it was evening before the first meal of the day was cooked. Here magnetic variation was found to be between 14° and 16° west.

18th June. Taking leave of the camp, Dr. Baikie followed a north-easterly course, and reached Zariya on the following day; passing the town of Zango, and a rocky defile with blocks of granite placed one on another, like a Cyclopean wall, surmounted by huge boulders. Dr. Baikie's servant, who had been left behind at the beginning to bring up the heavy goods, had arrived, and some time was occupied in re-arranging the loads. On the 26th June, they all left Zariya on the road to Kano, sleeping at Likoro, a walled town with 1000 inhabitants.

27th June, they crossed several streams which flowed to south-east and joined the Kaduna, and reached Guyimi. The country between Zariya and Guyimi is nearly level, with wet meadows and bare granite rock.

On the 29th, having left the town of Antsan they found the

streams flowing in an opposite direction, to pass round Bebeji and join one of the affluents of Lake Chad; they were now, therefore, in the central basin of the Sudan. Fever, which during the first part of the journey had spared Dr. Baikie, now came on, from the severe exposure and bad food. No mention is made in any of the notes of the daily use of quinine, and as in his general instructions for the preservation of health it is equally ignored, we may conclude that subsequent experience had not convinced him of its value as a prophylactic. It has also failed in other parts. Faki is the border town of Zariya, having been given up by one of the rulers of Kano.

30th June. The banks of streams in this region are of reddish clay, with sand and mud, resting on crystalline rocks. Bebeji is a large town with double walls, outside of which are fields of corn, cassada, ground-nuts, and indigo. It had been visited by Dr. Vogel, who fixed its latitude with accuracy, but was prevented from going on to Kano, where cholera was then raging. But from a rock outside the town Dr. Baikie obtained good compass bearings, which include the rock standing within the walls of that place. In Bebeji there are dates, limes, and lemons.

1st July. A mile from town they crossed the River Kunza, and reached Kaffi.

2nd July. The River Mallam was passed, with now only 2 feet of water in its sandy bed. A mile from town they were met by messengers, who escorted them into Kano, where they were well received by Sarin Saru, brother of the king, who was absent at a war camp in the south-eastern provinces of his dominion, whither it was at once agreed that Dr. Baikie should proceed.

On 5th July Dr. Baikie left Kano in light marching order. Outside the gate they passed Nasserawa, one of the suburbs, and followed a south and easterly course, over level land with whitish clay. Several walled towns were passed and streams crossed, which had already been seen when coming to Kano. At Sokwa Dr. Baikie found a man, whose father had been slave to the King of Fezzan, who had known Richardson, Barth, and Overweg, and told him of the fate of the papers of Dr. Vogel after the murder of Corporal Maguire.

6th July. The River Mallam was passed on rafts of calabashes, named "gaddo," which take three persons each time; the path then lay near the town of Girko between two granite hills.

7th July. After crossing the River Kunza and a granite rock named Hungu, 150 feet high, they reached Takai; but Dr. Baikie had a severe ague which forced him to dismount and rest for a time.

8th July. The king sent an escort to bring Dr. Baikie to Sangaia, where he received him with much attention. In the

town there is a mass of quadrilateral blocks of granite piled on each other, like those seen to the south of Zariya ; this peculiar form is due to the wearing of the granite in certain directions, which produces perched blocks, not unlike those similarly placed by icework in other countries.

9th July. Dr. Baikie followed the king and army to Dutsi, a town placed in an amphitheatre of hills. Here the king had a grand review of his army, and afterwards told Dr. Baikie that at Kano all papers should be given over to him ; but it now appeared that the greater part still remained at Zinder, whither they had been taken by the Azhenawa after the murder of Corporal Maguire.

14th July. Dr. Baikie left Dutsi, following a more easterly route than that he had come by, and supplying materials to fill in the map of a region unvisited by Dr. Barth.

If Dr. Baikie kept notes during his residence in Kano, they are not to be found among his papers. Most likely, when dwelling in a house, he wrote them out at once in full, and sent them off with other diaries. From the rough copies of despatches written in Kano and forwarded to Tripoli, we learn that the papers he was in search of proved to be of no value : they consisted of two books on astronomy, in German, bearing the names of Vogel and Overweg ; two Arabic psalm-books had also been brought to Kano, but were not forthcoming. After the murder of Corporal Maguire, it seems that the plunder, including manuscripts, a musket, and five-barrelled pistol, was taken to Zinder by the Azhenawa, where they still remain, and may be had for the trouble of going to get them ; but after the long distance already travelled, Dr. Baikie's supplies were exhausted, and he found himself compelled to return without having accomplished what he chiefly wished. While in Kano he suffered from fever, induced by his previous exposure and the filthy state of the city, which contains several lagoons of stagnant water, receptacles of filth exhaling malaria.

On the 14th August Dr. Baikie took leave of the king, and commenced his return to Nupe, following at first the same route he had come by, and afterwards a route more to the west. It was now the height of the rainy season, and streams which he had crossed without difficulty had become torrents filling their banks, and to be crossed only on rafts or in canoes. In the fields were heavy crops of corn, more luxuriant than those of the valley of the Niger, and the grass plains were more or less inundated. Around Bebeji there were green fields of young wheat and rice. There, a mixture of cotton-seed and bran is given to oxen, and is considered the most fattening food ; horses and asses are fed on millet.

In Zariya, where Dr. Baikie arrived on the 20th August, it was necessary to dry all the loads, which constant rain had thoroughly wetted. The king was still absent in Zhaba.

On the 1st September they again set out, but were delayed at each of the small streams; and at Riyuka the huts were flooded and almost uninhabitable.

On 10th September, turning to the west of the old path and following a mountain stream, they came to Birun Guari, formerly visited by Clapperton. It is one of the oldest cities of this region, and is well placed in a valley surrounded by hills, with the Kurita River passing to join that from Womba, which meets the Kaduna near Akiri. The king of this place has a very bad name, in consequence of many travellers having disappeared mysteriously while under his protection. At Zhan Ruwa, which they reached on the 16th September, an epidemic had killed many cattle. With loss of appetite the animals sickened, and died in three days.

On the 25th September they again entered Gumna, but the king was waging war with those in front, and after a long delay Dr. Baikie was obliged to return to Tegyina and follow a western route across the Mariga River, which comes from Womba and Birun Guari; reaching Rabba on the 6th November, having found his old friend King Masaba in camp, and enjoyed his hospitality for several days. The Rabba daily fevers prevented Dr. Baikie from attending to business, and it was not before the 22nd December he was able to set out in canoes for his station at the confluence of the Niger and Binue.

II.

ESTIMATED COURSE and DISTANCE of JOURNEY between the NIGER and KANO in HAUSSA, 1862; with BAROMETRIC ELEVATIONS of the PRINCIPAL PLACES, including the WATER-PARTING between the NIGER and LAKE CHAD.

Barometric Observations.

Hour.	Air.	Barometer Aneroid.	Place.	Hour.	Air.	Barometer Aneroid.	Place.
	o	In.			o	In.	
		29.35 min.	Bida, 16 miles N. of	3 P.M.	94	28.53	Wasiba,
		29.40 max.	the Kworra, 12 E. of the Kaduna.	7.30 A.M.	81	28.2	Gidan Magaja.
6 A.M.	82	29.30		5 A.M.	80	27.7	Karu.
4 P.M.	95	29.25	}{ Lemu.	2 P.M.	99	27.60	Koriga.
1 P.M.	85	29.45	Siji.	4 P.M.	94	27.4	Karkaso.
Noon.	100	29.55	{ Bed of River Ka- duna.	5 P.M.	89	27.42	Karsi.
9 A.M.	83	29.15		4 P.M.	90	27.35	Rafin-yasi.
5 P.M.	90	29.2	}{ Gumna.	4 P.M.	83	27.33	
				9 A.M.	83	27.44	Zariya.

ROUTE from BIDA to KANO.

Distance.	Course (Compass bearings).	Place.
Miles.		
7	N.N.E.	Bida, 6 miles in circumference.
2½	N.N.E.	Kpakpagi, pop. 1000.
1½	N.N.E.	Mankade, pop. 300.
2½	N.N.E.	Kpada, pop. 300.
5½	N.N.E.	Masalatsi, pop. 1200.
3	{ N.E. N. by E. }	Lemu, pop. 500.
2	N.N.E.	Dasagi, pop. 60.
4	N.E. by N.	Kabba, pop. 60.
6	N.N.E.	Tsiji, pop. 600.
½	..	Gbogi, pop. 800.
1½	N.N.E.	Bed of Kaduna, sandy, no rocks.
4	N.E. by N.	Wutere.
6½	N.E.	Kutmuku or Gurmi.
		Garu-gobaz.
4½	N.E.	Three ridges, running N.N.E.; a kind of shale almost crystalline, probably of the sandstone of Nupe; dip considerable.
6½	N. and N.E.	Gumna, pop. 3000,
9½	..	Tegyina, pop. 3500.
9	..	Ungwoi-bawa.
12	{ N.E. and N.E. ½ E.	Wasaba, pop. 2500.
4½	N.E.	Kwangoma, pop. 3000,
1	N.E.	Zhan-ruwa, 1200.
11½	N.E.	Gidan-magaja.
10	N.E.	Karu.
11	N.E.	Koriga.
14½	E. ½ S.	Riyuka.
1½	E.	River Karsi.
12½	E.	Karsи.
8	E.	Rafin-yasi.
9	{ N. 30°	Zariya.
14	N.E. ½ E.	{ Likoro.
6	N.E. ½ E.	Guyimi.
9½	N.E.	Antsan.
12½	N.E. ½ E.	Fa-ki.
1	N.E.	Bebeji.
6	N.E.	River Kunza.
3	N.E.	Madobi.
4½	N.E.	Gozza.
3	N.E.	Kaffi.
6½	N.E.	River Mallam.
		Kano.

ROUTE from KANO to the SOUTH-EAST and DUTSI.

Distance. Miles.	Course (Compass bearings).	Place.
8	S. 26° E.	KANO.
3	S. 27° E.	Dawaki, 2 ditches, 4 gates, 1600 or 2000 inhabitants.
$2\frac{1}{2}$	S. 30° E.	Sokwa, 2000 inhabitants.
$4\frac{1}{2}$	S. 40° E.	River Mallam, $\frac{1}{2}$ mile wide, 5 feet deep in July.
$2\frac{1}{2}$	S. 35° E.	River Armetti, 50 yards wide, flows N. to River Mallam.
2	S. 40° E.	Girko, walled, 2 ditches, 3000 or 4000 inhabitants.
		Dan Malaki, 150 or 200 inhabitants.
$2\frac{1}{2}$	..	River Dunduru (or Kunza), 60 or 70 yards wide, flows e. by n., comes from Kanawa and Bebeji.
$1\frac{1}{2}$	..	Small river flowing n. to River Kunza, 15 yards wide.
3	..	Small river from Dal, n. to Kunza, 60 yards wide.
..	..	Dan Serina, a walled town, 2 ditches, 1000 inhabitants.
5	..	Village and rock of Hungu.
$2\frac{1}{2}$	S.E.	River Dunduru Gaiya, small but deep stream.
$4\frac{1}{2}$	S.E.	Takai, walled, double ditch, 1500 inhabitants.
8	E.	Sangaiya, walled, double ditch, 1500 inhabitants.
12	N.E. by E.	Dutsi, wall and stockade, several miles circumference, 2500 inhabitants.
$9\frac{1}{2}$	N.W.	Katsa, 2 ditches, stockade.
7	W.N.W.	River Dunduru Gaiya, $5\frac{1}{2}$ feet deep, 20 yards wide, flows N.
3	..	Gaiya, walled town, 2 ditches, 4000 inhabitants.
$4\frac{1}{2}$	W.N.W. $\frac{1}{2}$ W.	Lajawa.
5	..	River Mallam, $\frac{3}{4}$ mile wide, 7 feet deep, N. 10° E.
..	W.N.W. $\frac{1}{2}$ W.	Gogyam, stockade, 1500 inhabitants.
5	..	Village and rock of Tanagar.
14	..	KANO.

RETURN JOURNEY from KANO to RABBA.

(In returning, Dr. Baikie altered his course to pass by Birun Guari and to reach Rabba instead of Bida, whence he started.)

Distance. Miles.	Course (Compass bearings).	Place.	Distance. Miles.	Course (Compass bearings).	Place.
2	?	Riyuka.	$1\frac{1}{2}$	W.?	Sumo.
14	N. 35° W.	Stream.	..	N.N.W.	Gbobi.
6	N. 60° W.	Tsofu.	9	W. by N.	Gberi.
?	?	Fa.	$2\frac{1}{2}$	S.W.	Stream.
12	S.S.W.	Birun Guari.	2	..	Stream.
10	S.S.W.	Kirazu.	$2\frac{1}{2}$	S.S.W.	Raganda.
6	S.S.W.	Kwoga.	..	W.	Stagnant water.
5	S.W. by S.	Stream.	8?	..	Stream.
$3\frac{1}{2}$	?	Gidan Magaja.		S.S.W.	Wutsisa.
1	S. $\frac{1}{2}$ W.	Zhan-ruwa.	$7\frac{1}{2}$	W. by S.	Kabozhi.
5	S.W.	Kwangoma.	$9\frac{1}{2}$	W. by S.	Udogo.
10	S.W.	Wasaba.	$8\frac{1}{2}$	W. by N.	Camp of Masaba.
12	S.W.	Ungwoi Bawa.	$6\frac{1}{2}$	S. 10° W.	Likoro.
?	S.W. by S.	Ungwoi Karami.	$6\frac{1}{2}$	S.W.	Kpaseta.
?	S. 10° W.	Kumuni.	$1\frac{1}{2}$	?	Fanga.
?	S. 70° W.	Tegyina.	$14\frac{1}{2}$	S. by E.	Ibi or Egbe.
$9\frac{1}{2}$	W. by N.	River Mariga (from Womba.	10	S.	Zuguna.
$4\frac{1}{2}$	N. $\frac{1}{2}$ W.	Lalli.	$11\frac{1}{2}$	S.	Mokwa.
			6	S.	RABBA.

Some of these
bearings are true,
not compass; the
fever then on Dr.
Baikie has com-
fused his notes.

III.

ENUMERATION OF KINGS OF THE FOLLOWING STATES OF HAUSSA AND NUPE.

(From the Notes of Dr. W. B. Baikie, R.N., collected in 1862.)

1. Kano.	4. Katsina.	7. Ader.
2. Zariya.	5. Gobir.	8. Daura.
3. Zamfara.	6. Azben.	9. Nupe.

1.—*The Kings of Kano in Haussa.*

(From Notes collected at Zariya, May 25, 1862.)

	Yrs. mhs. dys.		Yrs. mhs. dys.
1. Bakuda	70 0 0	23. Abubakr Kadda ..	7 0 0
2. Kanus	30 0 0	24. Mohamma Sabasara ..	1 0 0
3. Alkaji	2 0 0	25. Mohamma Zaki ..	37 0 0
4. Gaogau	50 0 0	26. Mohamma Abdallah ..	4 5 0
5. Makarkari	2 7 0	27. Mohamma Katamdi ..	20 0 0
6. Kaowana	1 0 0	28. Alhaji	1 0 0
7. Senaida	30 0 0	29. Sekaro	0 7 0
8. Ramagaka	7 0 0	30. Kakana	8 0 0
9. Taratori	7 0 0	31. Suyaka	0 1 0
10. Bangazhi	50 0 0	32. Yawa	10 0 0
11. Jenaji	0 0 12	33. Dadi	33 0 0
12. Yazhi	10 0 0	34. Saraku	19 0 0
13. Umar	0 0 10	35. Mohamma Kamfara ..	13 0 0
14. Nuto	0 0 10	36. Taukari	9 9 0
15. Goto	50 0 0	37. Yazhi	12 0 0
16. Danda	70 0 0	38. Baba Zaki	78 0 0
17. Abdalahi	15 0 0	39. Dauda	4 0 0
18. Yakubu	10 0 0	40. Alwalli	27 0 0
19. Nushima Riufa ..	37 0 0	41. Sulimana	12 0 0
20. Abdalahi	11 0 0	42. Dabu	27 0 0
21. Mohamma	50 0 0	43. Usman	10 0 0
22. Yakahi	0 5 0	44. Abdu	7 0 0

The last four are Fulani Kings, of whom the last is now on the throne. Sulimana was a Fulo from Bornu; Dabu a Basibebe of Kano; Usman son of Dabu, and Abdu, brother of Usman.

2.—*Kings of Zariya in Haussa.*

(From Notes collected at Zariya, May 26, 1862.)

1. Gunguma.	15. Kirari.
2. Mataze.	16. Zhizhinka.
3. Tumza.	17. Sukana.
4. Tumusa.	(The above seventeen were heathens.)
5. Sulimano.	
6. Nassau.	18. Rabbawawa 25 0 0
7. Damazaki.	19. Gudaumaska 2 0 0
8. Neigwago.	20. Nawakarri 3 0 0
9. Kusa.	21. Kimas 1 0 0
10. Nawinako.	22. Bakaturunku 30 0 0
11. Masikar.	23. Ibrahim 27 0 0
12. Kiyau.	24. Karma 10 0 0
13. Bariyakar.	25. Kafau 2 0 0
14. Nazhidiadi.	26. Bako 13 0 0

	Yrs. mhs. dys.		Yrs. mhs. dys.
27. Aliyu	6 0 0	48. Rabbon bawa ..	7 0 0
28. Suyaali	11 0 0	49. Mohamman Gabi ..	1 1 0
29. Musa	0 6 0	50. Inusa	5 5 0
30. Gabi	3 6 0	51. Bako babbani Muturu	50 6 0
31. Waude	0 0 1	52. Aliyu	1 0 0
32. Abdulkuda	9 0 0	53. Mohammadu Maigamo	2 8 0
33. Brahimma	3 0 0	54. Isabaku	20 3 0
34. Aliyu	27 0 0	55. Mokkam	2 1 0
35. Mohamma Rabbaawawa	0 6 0		
36. Ibrahim Yasku	13 0 0		
37. Bako	3 0 0		
38. Sukana	1 0 0		
39. Aliyo	7 0 0		
40. Ibrahim	3 6 0		
41. Muhammado	17 9 0		
42. Suya-ali	9 8 0		
43. Bako da Moya	6 5 0		
44. Isabaka	2 0 0		
45. Ibrahim a sa Kuka	1 4 0		
46. Bako dan Sekwana	10 0 0		
47. Mohamma dan Gun-guma }	11 2 0		

FILANI KINGS.

56. Mallam Musa	12 10 0
57. Yan Musa	14 10 0
58. Abdul Kerim	11 5 0
59. Hammada	0 0 53
60. Mohamman Sani	77 3 4
61. Sidi	0 10 0
62. Abdu Salami	1 7 0
63. Abdu, 6 years; now reigning in	
	1862.

Pulo Kings of Zariya.

- | | |
|--------------------------------------|-------------------------------------|
| 1. Mallam Musa, Malle. | 5. Mohammad Sani, son of Yan Musa. |
| 2. Yan Musa, Ba Filatsin Bornu. | 6. Sidi, son of Mallam Musa. |
| 3. Abdal Kerim, Ba Filatsin Katsina. | 7. Abdu Salami, Ba Filatsin Zariya. |
| 4. Hammada, son of Yan Musa. | 8. Abdu, son of Hammada. |

Mallam Musa, who subdued Zariya, came first as a poor Mallam, and Yan Musa was a petty trader wearing a "banti." When Mallam Musa became king, he made Yan Musa his head "Maidawaki." Sidi was dethroned for cruelty by Sultan Aliyo, and died or was killed in Sokoto. Mohammed Sani was very popular. Abdu Salami was killed in battle; his father's name was Mallam Maikai, born in Egabbi. Abdu is a very quiet, reserved man, about 44 years old, and is on the whole well liked. He does not speak much Fulo; he has numerous offspring, and his eldest son is his "Maidawaki."

3.—*Kings of Zamfara.*

1. Mallu.	7. Dan Gaddo.	11. Tabari.
2. Yakubu.	8. Dan Bawa.	12. Mohammadu.
3. Marake.	9. Adam.	13. Mohamma.
4. Aberisi.		14. Isahaku.
5. Dan Bako.	PULO KINGS.	
6. Na Godi.	10. Mohamian Zhemu.	

4.—*Kings of Katsina.*

1. Alumba Rakka.	4. Almuzaana.	7. Gaude.
2. Aligu.	5. Al Bakari.	8. Kadri.
3. Sanwan.	6. Mohamman Gama.	9. Tofo.

10. Meketamma.
11. Aatu.
12. Hamidu.
13. Khalidu.
14. Yakuba.
15. Mallam.
16. Sarikin Magazhi.
17. Koran.

- | | |
|-----------------------|---------------------|
| 18. Toagarana. | 26. Amafedji. |
| 19. Agoreggi. | 27. Dan Gbaura. |
| 20. Gozo. | 28. Dan Bekkori. |
| 21. Magazhin Khalidu. | PULO KINGS. |
| 22. Dan Kasawa. | |
| 23. Randa. | |
| 24. Umari. | |
| 25. Binoni. | 29. Umaru. |
| | 30. Sadiku. |
| | 31. Mohamman Bello. |

5.—*Kings of Gobir.*

- | | | |
|-------------|--------------------|---------------------|
| 1. Maubu. | 10. Wurfakka. | 19. Bunu. |
| 2. Sukate. | 11. Dangana. | 20. Yumfa. |
| 3. Tina. | 12. Zhivan. | 21. Sulufu. |
| 4. Zhuki. | 13. Magazhin Gadi. | 22. Gwomki. |
| 5. Wadobe. | 14. Batsiri. | 23. Ali. |
| 6. Yeudi. | 15. Soba. | 24. Zhibbo. |
| 7. Gawo. | 16. Babari. | 25. Batsiri. |
| 8. Biguga. | 17. Bawa. | 26. Mayidjaki. |
| 9. Gazhire. | 18. Yakuba. | 27. Bawa dan Gwomki |

6.—*Kings of Azben.*

- | | | |
|----------------------|------------------------|----------------------|
| 1. Mazanázhi. | 21. Mikal. | 42. Alagam. |
| 2. Tumbar. | 22. Mikitu. | 43. Igidallam. |
| 3. Dan Sakkó. | 23. Kiltanwul. | 44. Ifgas. |
| 4. Yutumbar. | 24. Girmus. | 45. Ikkidammat. |
| 5. Yerimas. | 25. Ibrahimia Khalilu. | 46. Hogazam. |
| 6. Mohamma Kulu-wal. | 26. Ibrahimia Segir. | 47. Awagatam Zadeir. |
| 7. Atturus. | 27. Ahhammadu bukai. | 48. Awakis. |
| 8. Loso. | 28. Wandandi. | 49. Eminsi. |
| 9. Ibrahim. | 29. Alwassal. | 50. Yuhabd el Kadir. |
| 10. Annur. | 30. Kilageris. | 51. Mohamma Amizhi. |
| 11. Emakke. | 31. Hawade. | 52. Mohamma Guma. |
| 12. Ezaganwel. | 32. Huma. | 53. Mohamma Tagamas. |
| 13. Iserfan. | 33. Zuwar. | 54. Ibra. |
| 14. Kil mual. | 34. Thiragan. | 55. Abubakr. |
| 15. Kil'nugal. | 35. Izale. | 56. Inagaras. |
| 16. Maganwil. | 36. Ilias. | 57. Aruf. |
| 17. Mohammed Weilaz. | 37. Alumu. | 58. Al Harsan. |
| 18. Iluikul. | 38. Yunsikil. | 59. Sikita. |
| 19. Ahamman. | 39. Azure. | 60. Mohamma Magaruk. |
| 20. Ilazhil. | 40. Azgan. | |
| | 41. Amale. | |

7.—*Kings of Ader.*

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|-----------------|--------------------|---------------------------|
| 1. Budal. | 10. Amankai. | 19. Zukkar. |
| 2. Gumau. | 11. Arasio. | 20. Waminzar. |
| 3. Guma. | 12. Mohamman Nida. | 21. Wellimwada. |
| 4. Gumbun bakr. | 13. Giskas. | 22. Wellimwaza. |
| 5. Astu. | 14. Amarazal. | 23. Mohamman Tumburki. |
| 6. Kaderi. | 15. Ibrilu. | 24. Mohamman dan al Wali. |
| 7. Musil. | 16. Tumurki. | |
| 8. Tenabir. | 17. Alwali. | |
| 9. Aminkiu. | 18. Weilaz. | 25. Nitahar. |

8.—*Kings of Daura.*

1. Daurama.	17. Halasu.	33. Wogasi.
2. Karabgari.	18. Sanutu.	34. Sattaina.
3. Bawo.	19. Azbefas.	35. Hauza.
4. Zhada.	20. Wobasi.	36. Wosalla.
5. Banan alla.	21. Arahin.	37. Trofo (driven away by Fulani).
6. Kariya wiya.	22. Saangutu.	38. Serikin guarı.
7. Womasu.	23. Mazozhi.	39. Lukudi.
8. Atsiku.	24. Womasu.	40. Kyenkyere.
9. Sanuku.	25. Tassa.	41. Nihu.
10. Waama.	26. Sattaku.	42. Ishakku.
11. Runo.	27. Tudunkwinzhi.	43. Mohamma.
12. Waasu,	28. Womasi.	44. Zabeiru.
13. Sabtan.	29. Sunaa.	45. Mohamman Bello.
14. Sanda.	30. Wazhi.	
15. Abdu.	31. Wohami.	
16. Wagashi.	32. Hazo.	

The present King of Daura belongs to the tribe of Yerimawa. He is now old; is short, with large head; says little, and has a peculiar kind of snort. He has upwards of 30 children.

9.—*Kings of Nupe.*

Etsu Tsado,
 " Zini,
 " Zibi,
 " Dala, } Reigned at Nupeko.

1. Estu Jia, king about 1760-85. A great warrior, and a popular king, whose reign is said to have been the most flourishing in Nupe. He built Gbara, and removed thither from Nupeko; he built Leno. All Nupe, from Ebe to Dibo and Kupa, was directly under him. When he captured people he made them settle and build towns, and many of these towns still exist and flourish. He drove his relative Mazu to Yauri. He was a Mohammedan.

2. Etsu Samaza was driven by Mazu from Nupe, and fled to Ibgira. He died in Koton Karafe: his descendants still live in Igbira; one of his sons, an old man, being now in Ajara.

3. Etsu Mazu seized the throne: he was a relative of Etsu Jia by the female side.

4. Kolo Nagari, son of Etsu Mazu; he took his mother's advice so constantly that the Nupe people said they would not be governed by a woman, and, rising against him, drove him to Yauri. He and his father's family were settled about Djugoma, and when he was driven from the throne this district adhered to him, and has ever since been separate from Nupe, being known as Egwa-djagwa or Djagwa-djugwa, the chief town being Tsuafo. On his death he was succeeded by Mamudu, who first invited the Fulani to Nupe, who on their arrival found

Mamudu dead. He was succeeded by his brother Mazu ; he by his relative Majia (Mama Jia), of whom more afterwards.

5. Aliaza, more commonly known as Yikenko, from a saying of his that "his teeth were now out and would not again go back." He was a heathen, although all his family were Moslem-man, his maternal grandfather having been N'dazo, or priest of Gemoko, a brave and open-handed, but often cruel, man ; he became king about 1790. He first began the practice of selling as slaves captives taken in war. Being engaged in war on Egwa-djugwa, he lived long at Soroge or Sologe, in Gbedagi ; he was driven to Busa, but returned and regained his throne. He died at Vundugi, in Kusopa, near Daba-guze.

6. Zimada Kolo, grandson of Etsu Jia, was born in Zima, near Gbara ; a tall, fine man, marked with "bikun;" considered a just, good king. He lived long at Wabogi, then moved to Lagbata, where he was driven by war ; then to Ragata, where he was killed about 1810 by Majia and Mallam Dedo. In his time Majia and the Fulani first made combined war, and the latter commenced to have a footing in Nupe.

7. Tderiza, or Idriza, son of Zimada. On death of his father he fled to Ilorin ; after a time he crossed the Kworra, at Gbadjebo, and made war on the Fulani at Rabba, he having his camp at Jangi. Majia was called in, and bringing war behind Idriza, he was compelled to fly, and settled for a long time at Katsa, in Esitako, where he had a war camp. He died and was buried in Gbara. His full name was Idriza Gana. He was a tall, fine man, very dark, and marked with "bikuns." He was born in Wabagi in 1796.

Majia during all this time disputed the kingdom ; he was of Etsu Mazu's branch of royal family, and his previous title had been "nokoji," which had been held by his father, grandfather, and great-grandfather. He called in and was supported by the Fulani, and he first introduced the dreadful civil war which nearly destroyed Nupe. He was for some time settled in Rabba, and after the death of Zimada the whole of Kusofa was given him by the Fulani. He was a stout man of yellowish complexion, and no mark ; his mother was a Kupa woman, a slave, but good-looking. At first he was a cap-maker ; he was born at Zima ; died and was buried at Djuguma.

8. Etsu Isa, son of Idriza, now represents the legitimate branch of the Nupe royal family. At first he resided at Gbara, then at Labozhi, where he was attacked by Omaru, and where all the old Nupe insignia of royalty were burned. He now lives in Bida, having promised not to disturb the present order of things. Several towns about Lom have been given to him by Masaba : he is about 44 years of age.

In Tsuafu, Majia was succeeded by his son Etsu Isado, who was an active agent in taking and destroying Rabba, under Ottoman Zaki. He died in Borogi, and was succeeded by Maza, who was killed in Djuguma in Omaru's wars. The present King of Tsuafu is named Sabo, but commonly known as Babba; he is grandson of a former king named Sabu, a branch of Majia's family, and if he dies the throne will probably be filled by one of Majia's descendants, many of whose younger sons are yet alive.

Note.—Ebe pays Tsuafu, which unites with Masaba in paying to the Sultan of Gwando.

Masaba was driven from Rabba by Mazigi and Andi, about three years after Mallam Dedo's death, or about 1836.

CHILDREN OF MALLAM DEDO.

Name.	Eldest Son.	Mother.
1. Mazigi	Umaro	Fulo.
2. Abdallah	Muhamma Gana ..	Nupe-Basa.
3. Usman Zaki. (Died 1859)	Maliki	Bornu.
4. Khabiba, aged, now (1864) about 60	No children	Kororofo.
5. Mustafa	Yusufu, or Tsado Dzuza	
6. Mahamet	Yisagi	Fatima a Nupe.
7. Mahamma Saba,* Lukpon, or Masaba,) now aged 52; King of Nupe (1864)/	Lukpon	
8. Ibrahim	Rasid or Tsado Ziko	Nupe.
9. Aminatu .. .. .. .. .. ..	.. .. ..	Akokko.

* The other names are Mahamma Saba, Maha Saba, Masaba, Etsu Saba, Nda Saba.

IV.

On the Rise of the Niger and its Eastern Tributaries ; from the Notes of Dr. W. B. Baikie, R.N.

At the end of June, or in the first week of July, the Kworra begins to rise between Rabba and the Confluence ; it has reached its highest level by the end of September. Early in October it begins to fall ; throughout November it falls rapidly, but slackens towards the end of December, and by the 1st of January is nearly stationary. From the latter part of this month to the end of February there is a second rise of limited amount, which at Rabba varies with the season from 8 to 18 inches, and at the Confluence does not exceed 4 or 6 inches. Early in March it again falls, and steadily subsides until the end of June.

The Binue, Guarara, and Kaduna, or Lifun, have but one period of rise, which begins before that of the main stream, and reaches its height before the Kworra has begun to fall ; this com-

mences early in April, and may possibly have caused the rise observed by Mr. Laird at Idda on the 22nd of March.

The Kworra, coming from the westward, and extending over many degrees of longitude, is differently acted on in various parts of its course.

From Yauri downwards the rains are brought by south-east and north-east winds, and to a more limited extent in September from the south-west.* In its middle part the rains have less influence, while towards its source the chief supply is brought by south-west winds in September, October, and November. The floods which these occasion, flowing through level countries at a slow rate, do not reach Timbuku before January, when they first retard the fall, and occasion a small rise, varying in amount at different points with the width of the river-bed.

At the Confluence there is a difference in the colour of the two waters; that of the Binue is of a deep transparent blue, called in Haussa "bakyin ruwa," or black water, while the Kworra, from its turbid muddy colour, is named "farin ruwa," or white water; this distinction is lost when both are in flood, and come down loaded with sediment.

V.

LIST OF NATIVE VOCABULARIES OF SMALL OR BEFORE LITTLE KNOWN TRIBES.

(Collected by Dr. W. B. Baikie, R.N.)

1. Yeskwa.	10. Basa.
2. Yagba.	11. Kamuku.
3. Ayo (near Daroro).	12. Gadde.
4. Zozantsi.	13. Kadara.
5. Hausra words from Zariya.	14. Bonu.
6. Towani (western districts).	15. Gulengwe or Ugn.
7. Ninjom (Towani, N.E.).	16. Ungwoi.
8. Kattab.	17. Zhaba.
9. Wura.	

V. *A Visit to the North-East Province of Madagascar.* By the Rev. H. MAUNDRELL. Communicated by the Right Rev. V. W. RYAN, D.D., Bishop of Mauritius.

Read, January 14, 1867.

THE north-east province of Madagascar is called by Europeans *Vohimare*, but by the natives of the country *Vohimarina* (from *Vohitra*, village, and *marina*, level). This province is well watered by numerous streams, which, rising among the mountains of the interior, flow eastward into the Indian Ocean. The

* Between Bida and Zariya the rainy season ends on the 3rd of October.